

CLAIMS:

1. A coin handling machine comprising a rotatable disk for receiving coins deposited into a coin handling machine and feeding out the coins into a coin sorting passage one by one by a centrifugal force produced by
5 rotation of the rotatable disk, a reference guide rail for guiding the coins by an inner wall thereof, transporting belt means for transporting the coins while they are held between the coin sorting passage and themselves, and a sensor for detecting optical properties and magnetic properties of the coins, the coin handling machine further comprising a
10 coin sorting opening formed in the coin sorting passage downstream of the sensor along the inner wall of the reference guide rail and a coin sorting member provided in the vicinity of a side portion of the coin sorting opening on the side of the reference guide rail, the coin sorting member comprising at least one coin supporting section having a coin supporting
15 surface for supporting one edge portion of the coin being transported in the coin sorting passage and at least one coin press section for pressing the coin, the coin handling machine further comprising a coin sorting member driving means for moving the at least one coin supporting section between a coin support position where the coin supporting surface can
20 support one edge portion of the coin being transported in the coin sorting passage and a retracted position where the coin supporting surface is retracted from the coin support position and cannot support the coin and moving the at least one coin press section so as to press the coin downward in synchronism with the movement of the coin supporting
25 surface to the retracted position and a control means for driving the coin sorting member driving means based on detection signals from the sensor and the coin handling machine being constituted so as to forcibly drop the coin supported by the coin supporting surface into the coin sorting

opening and sort it.

2. A coin handling machine in accordance with Claim 1, wherein the coin sorting member comprises a coin supporting section having a coin supporting surface for supporting one edge portion of the coin being transported in the coin sorting passage and a coin press section integrally formed with the coin supporting section above the coin supporting surface and adapted for pressing the coin and the coin sorting member driving means is constituted so as to rotate the coin sorting member about a substantially horizontal axis.

3. A coin handling machine in accordance with Claim 2, wherein the coin supporting section includes a side wall portion substantially perpendicular to the coin supporting surface, and the coin sorting opening and the coin sorting member are formed so that when the coin supporting section of the coin sorting member is located at the coin support position, the side wall portion of the coin supporting section is flush with the inner wall of the reference guide rail and a distance between a side portion of the coin sorting opening on the side of the coin sorting passage and the side wall portion of the coin supporting section is smaller than a diameter of the smallest coin to be handled.

4. A coin handling machine in accordance with Claim 2, wherein the coin sorting member driving means is constituted as a rotary solenoid.

5. A coin handling machine in accordance with Claim 3, wherein the coin sorting member driving means is constituted as a rotary solenoid.

6. A coin handling machine in accordance with Claim 4, wherein one end portion of an arm whose other end portion has a fan-like cross section is fixed to an output shaft of the rotary solenoid, the coin supporting section includes an engagement portion having a fan-like cross section and formed with a gear and a gear on the engagement portion engages with the gear formed on the other end portion of the arm so that a driving force of the rotary solenoid can be transmitted to the coin sorting section.

7. A coin handling machine in accordance with Claim 5, wherein one end portion of an arm whose other end portion has a fan-like cross section is fixed to an output shaft of the rotary solenoid, the coin supporting section includes an engagement portion having a fan-like cross section and formed with a gear and a gear on the engagement portion engages with the gear formed on the other end portion of the arm so that a driving force of the rotary solenoid can be transmitted to the coin sorting section.

8. A coin handling machine in accordance with Claim 1, wherein the coin sorting member includes a cylindrical section and a plurality of coin supporting sections formed on the cylindrical section so as to radially extend, each of the plurality of coin supporting sections including a coin supporting surface for supporting one edge portion of a coin being transported in the coin sorting passage by the transporting belt means when the coin sorting member is located at the coin support position and a coin press section for pressing down the upper surface of the coin when the coin sorting member is moved to the retracted position, and the coin sorting member driving means is constituted so as to rotate the coin sorting member about a substantially horizontal axis.

9. A coin handling machine in accordance with Claim 8, wherein the plurality of coin supporting sections are formed on the cylindrical section of the coin sorting member so that in synchronism with the movement of the coin supporting section which has been located at the coin support
5 section thereof and has supported one edge portion of a coin being transported in the coin sorting passage with the coin supporting surface thereof toward the retracted position thereof, the coin press section of the coin supporting section neighboring the coin supporting section moving to the retracted position among the plurality of coin supporting sections can
10 press downward the upper surface of the coin which has been supported by the coin supporting surface of the coin supporting section moving to the retracted position.

10. A coin handling machine in accordance with Claim 8, wherein the
15 coin sorting opening is formed and the coin sorting member is provided so that when the coin supporting section of the coin sorting member is located at the coin supporting position, the circumferential surface of the cylindrical section of the coin sorting member is flush with the inner wall of the reference guide rail and that a distance between the
20 circumferential surface of the cylindrical section and a side portion of the coin sorting opening on the side of the coin sorting passage is smaller than a diameter of the smallest coin to be handled.

11. A coin handling machine in accordance with Claim 9, wherein the
25 coin sorting opening is formed and the coin sorting member is provided so that when the coin supporting section of the coin sorting member is located at the coin supporting position, the circumferential surface of the cylindrical section of the coin sorting member is flush with the inner wall

of the reference guide rail and that a distance between the circumferential surface of the cylindrical section and a side portion of the coin sorting opening on the side of the coin sorting passage is smaller than a diameter of the smallest coin to be handled.

5

12. A coin handling machine in accordance with Claim 8, wherein the coin sorting member driving means is constituted as a pulse motor.

13. A coin handling machine in accordance with Claim 9, wherein the
10 coin sorting member driving means is constituted as a pulse motor.

14. A coin handling machine in accordance with Claim 10, wherein the coin sorting member driving means is constituted as a pulse motor.

15. 15. A coin handling machine in accordance with Claim 11, wherein the coin sorting member driving means is constituted as a pulse motor.

16. A coin handling machine in accordance with Claim 12, wherein a drum formed with a gear on a circumferential surface thereof is fixed to
20 an output shaft of the pulse motor, a cylindrical engagement member formed with a gear on a circumferential surface thereof is integrally mounted on the coin sorting member, and the gear formed on the circumferential surface of the engagement member and the gear formed on the circumferential surface of the drum are meshed so that a driving
25 force of the pulse motor can be transmitted to the coin sorting member.

17. A coin handling machine in accordance with Claim 13, wherein a drum formed with a gear on a circumferential surface thereof is fixed to

an output shaft of the pulse motor, a cylindrical engagement member formed with a gear on a circumferential surface thereof is integrally mounted on the coin sorting member, and the gear formed on the circumferential surface of the engagement member and the gear formed
5 on the circumferential surface of the drum are meshed so that a driving force of the pulse motor can be transmitted to the coin sorting member.

18. A coin handling machine in accordance with Claim 14, wherein a drum formed with a gear on a circumferential surface thereof is fixed to
10 an output shaft of the pulse motor, a cylindrical engagement member formed with a gear on a circumferential surface thereof is integrally mounted on the coin sorting member, and the gear formed on the circumferential surface of the engagement member and the gear formed on the circumferential surface of the drum are meshed so that a driving
15 force of the pulse motor can be transmitted to the coin sorting member.

19. A coin handling machine in accordance with Claim 15, wherein a drum formed with a gear on a circumferential surface thereof is fixed to an output shaft of the pulse motor, a cylindrical engagement member
20 formed with a gear on a circumferential surface thereof is integrally mounted on the coin sorting member, and the gear formed on the circumferential surface of the engagement member and the gear formed on the circumferential surface of the drum are meshed so that a driving force of the pulse motor can be transmitted to the coin sorting member.

25

20. A coin handling machine in accordance with Claim 12, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially

located at the coin supporting position.

21. A coin handling machine in accordance with Claim 13, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.

22. A coin handling machine in accordance with Claim 14, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.

23. A coin handling machine in accordance with Claim 15, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.

24. A coin handling machine in accordance with Claim 16, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.

25. A coin handling machine in accordance with Claim 17, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.

26. A coin handling machine in accordance with Claim 18, wherein the

pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.

- 5 27. A coin handling machine in accordance with Claim 19, wherein the pulse motor is constituted to rotate the coin sorting member in such a manner that the plurality of coin supporting sections are sequentially located at the coin supporting position.